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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,549

06/08/2006

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F2040(C)

3834

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EXAMINER

BADR, HAMID R

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

07/07/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,549	<b>Applicant(s)</b> GANESAN ET AL.	
	<b>Examiner</b> HAMID R. BADR	<b>Art Unit</b> 1794	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

Applicants' amendment filed on 3/23/2009 is acknowledged.

All outstanding rejections have been overcome by applicants' amendments/arguments.

However, new grounds of rejections are set forth below.

Claims 1-17 are being considered on the merits.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Case law holds that applicant's specification must be "commensurately enabling [regarding the scope of the claims]" *Ex Parte Kung*, 17 USPQ2d 1545, 1547 (Bd. Pat. App. Inter. 1990). Otherwise **undue experimentation** would be involved in determining how to practice and use applicant's invention. The test for undue experimentation as to whether or not all compounds within the scope of claims 1-17 can be used as claimed and whether claims 1-17 meet the test is stated in *Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. Inter. 1986) and *In re Wands*, 8 USPQ2d 1400, 1404 (Fed.Cir. 1988). Upon applying this test to claims 1-17, it is believed that undue experimentation **would** be required because:

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(a) *The quantity of experimentation necessary* is **great** since claims 1-17 read on “water soluble black leaf tea” while the specification discloses “cold water infusible black leaf tea”.

(b) There is **no direction or guidance presented** for preparing a **leaf tea** which is soluble in water.

(c) There is an **absence of working examples** concerning the solubility of an insoluble leafy material such as leaf tea in water. .

In light of the above factors, it is seen that undue experimentation would be necessary to make and use the invention of claims 1-17.

2. .The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 is indefinite for “cold water soluble black leaf tea” and “the black leaf tea to be infusible in water at 5C to 100C”. While the infusion of leaf tea in water at temperatures claimed is possible, the solubility of leaf tea in water is confusing. It is unclear whether the black leaf tea is supposed to be cold water infusible or cold water soluble.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. (GB 2 074 004; hereinafter R1) in view of Ganesan et al. (US 2001/0033880; hereinafter R2).

3. R1 discloses a process for production of black leaf tea where the tea leaves are treated with an acid (0.02 to 0.7 parts by weight of acid to every part by weight of green tea) to lower the pH. R1 teaches of mixing green tea with an acid to lower the pH so that the fermentation is carried at pH 4.3-5.0 range. (page 1, col. 1, lines 40-44)

4. R1 discloses that the process is suitable for fermentation of the withered and macerated material known as "dhool", and readily results in a finished black tea (page 1, col. 1, lines 45-49).

5. R1 teaches of using the acid alone or as a buffer solution. Citric acid is mentioned as one of the acids of choice. (page 1, col. 1, lines 58-64)

6. R1 discloses the objective of the invention to be maximizing theaflavins (TF) at the expense of Thearubigins (TR). (page 1, col. 2, lines 103-105)

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7. R1 simulates the features of commercial manufacturing in Example 1. The acid is added at the time of leaf maceration . The macerated tea leaves are then fermented at 25C in a stream of oxygen. The fermentation is allowed to proceed for 40 minutes.

8. Example 4 also gives the details of a commercial process on a small scale where withering of plucked tea leaf, maceration of the tea leaves, fermentation of the tea leaves and finally drying of the resulting tea is practiced where in the macerated material is sprayed with an acid solution prior to fermentation. (page 2, col. 1, Example 4)

9. while all the details of the production of black leaf tea is given wherein the macerated leaves are treated with an acid solution, R1 is silent regarding the use of ascorbic acid in the production of black leaf tea.

10. R2 discloses a process for manufacturing black leaf tea that is infusible in hot or cold water. (Abstract).

11. R2 discloses that tea manufacture, especially black tea manufacture traditionally comprises; withering, macerating, fermenting and firing. [0017].

12. R2 discloses the process to comprise withering the plucked tea leaves (optional, but preferred), maceration in which the withered leaves are rolled to bruise and crush the leaves, fermentation during which catechins are converted to colored substances and finally firing in which the fermented product is fired and dried to give a black leaf tea. [0018-0020].

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13. R2 discloses a modification of the traditional process by treating the tea leaves with a solubilizing compound including ascorbic acid or its salts in order to enhance the solubility of the black tea in cold water. [0022].

14. R2 teaches that the tea leaves are treated with the solubilizing compound post plucking. The compounds are in the form of a solution at a concentration of from 0.5-10% by weight of tea. The solubilizing compound can be applied singly or in split doses [0024-0025].

15. R2 discloses that the tea is fermented for 10 minutes to 3 hours at 10 to 60C [0026].

16. R2 discloses that the product obtained by the above process can be used to produce instant tea or for infusing black tea in water at temperatures in the range of 5-100C [0030]. Given that the tea will be an instant tea, it is clear that it can be infused by microwaving as presently claimed.

17. R2 teaches that ascorbic acid can be added before maceration, during maceration and post maceration. [0033]. Given that the fermentation starts with the onset of maceration, the addition of ascorbic acid during maceration or post maceration can be considered during the fermentation stage.

18. R2 discloses a process in which the ascorbic acid solution is added after 30 minutes of fermentation and the fermentation is allowed to continue for another 30 minutes [Example 1, preparation of Sample 3].

19. R1 discloses the acidification process wherein the concentration of certain compounds affecting the quality of the finished product is increased. R2 teaches of

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using ascorbic acid causing the leaf tea to be infusible in water at temperatures in range of 5C-100C. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use acidifying compounds such as citric acid to increase the concentration of theaflavins (TF) which in turn increase the briskness and brightness of tea liquor as taught by R1 and incorporate ascorbic acid in the process of making leaf tea to make the finished product which is cold water infusible. One would do that to improve the organoleptic properties as well as practicality of making a tea infusion in wide range of temperatures. Absent any evidence to contrary and based on the combined teachings of the cited references, there would be a reasonable expectation of success in making a dried black leaf tea with the mentioned properties.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R Badr  
Examiner  
Art Unit 1794

/KEITH D. HENDRICKS/

Supervisory Patent Examiner, Art Unit 1794